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09/911,715	07/25/2001	Takeshi Shibuya	500.40384X00	4049

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EXAMINER

LEE, TOMMY D

ART UNIT PAPER NUMBER

2624

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/911,715

Applicant(s)

SHIBUYA ET AL.

Examiner

Thomas D. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20010725.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2-8, 10 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-4 and 10 each recite the limitation "said first, second and *third* proof parts" (emphasis added, see claim 2, line 18; claim 3, line 19; claim 4, line 20; claim 10, lines 22-23). There is insufficient antecedent basis for this limitation in the claims. Note that claims 2-4 and 10 each recite "an *intermediate* proof part" (emphasis added, see claim 2, lines 13-14; claim 3, lines 14-15; claim 4, claim 4, lines 13-14; claim 10, lines 14-15). It is not clear whether the third proof part refers to the intermediate proof part recited earlier in the claims. Claims 6-8 depend from claims 2-4, respectively; and claim

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13 depends from claim 10. Furthermore, claim 5 recites "said third proof part" (claim 5, line 2), but claim 1, from which claim 5 depends, does not recite any proof parts.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5-7, 9-11, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,917,511 (Ueda).

Regarding claim 1, Ueda discloses an image output device for outputting a color of different tones on a medium (printer 2 (Fig. 1)), comprising: a function for outputting on said medium test chart having tone-changing areas where a tone of a color output changes in steps arranged alternately with tone-fixed areas where a predetermined tone of said color is output (test chart with tone-changing areas I1, I2, I3, arranged alternately with tone-fixed areas D1, D2, D3 (Fig. 2; column 4, lines 4-26)); input means for accepting tone information from said test chart output (gray level sequence compared with adjacent gray level standard, point along sequence appearing equal to accurate gray level input by manipulation of keyboard 12 (column 4, lines 42-53)); and adjusting means for adjusting output to said medium based on data for correcting said tone calculated from said tone information input (tone signal calculated based on gray level input, printer controlled by tone signal (column 4, lines 54-62)).

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Regarding claim 2, Ueda discloses an image output device for outputting a color of different tones on a medium (printer 2 (Fig. 1)), comprising: a function for outputting on said medium test chart data having tone-changing areas where a tone of a color output changes in steps arranged alternately with tone-fixed areas where a predetermined tone of said color is output (test chart with tone-changing areas I1, I2, I3, arranged alternately with tone-fixed areas D1, D2, D3 (Fig. 2; column 4, lines 4-26)), said test chart data comprising a first proof part where said tone-fixed areas are output at a specific first tone and can be compared with tones of said tone-changing areas (tone-changing area I1 and tone-fixed area D1 (column 4, lines 42-53)); a second proof part where the tone-fixed areas are output at a second tone greater than the first tone and can be compared with tones of said tone-changing areas (tone-changing area I3 and tone-fixed area D3 (column 4, line 65 – column 5, line 1)); and an intermediate proof part where the tone-fixed areas are output at a tone between said first and second tones and can be compared with tones of said tone-changing areas (tone-changing area I2 and tone-fixed area D2 (column 4, lines 63-65)); and input means for accepting tone information on said first, second and third proof parts from the result of test chart data output on said medium (gray level sequence compared with adjacent gray level standard, point along sequence appearing equal to accurate gray level input by manipulation of keyboard 12 (column 4, lines 42-53)); and adjusting means for adjusting output on said medium based on data for correcting said tone calculated from said tone information input (tone signal calculated based on gray level input, printer controlled by tone signal (column 4, lines 54-62)).

Regarding claim 3, Ueda discloses an image output device for printing a color of different tones on a medium (printer 2 (Fig. 1)), comprising: a function for outputting on said medium test chart data having tone-changing areas where a tone of a color to be printed changes in steps arranged alternately with tone-fixed areas where a predetermined tone of said color is printed (test chart with tone-changing areas I1, I2, I3, arranged alternately with tone-fixed areas D1, D2, D3 (Fig. 2; column 4, lines 4-26)), said test chart data comprising a first proof part where said tone-fixed areas are output at a first tone as a tone of a color of said medium and can be compared with tones of said tone-changing areas (tone-changing area I1 and tone-fixed area D1 (column 4, lines 42-53)); a second proof part where the tone-fixed areas are output at a second tone greater than the first tone and can be compared with tones of said tone-changing areas (tone-changing area I3 and tone-fixed area D3 (column 4, line 65 – column 5, line 1)); and an intermediate proof part where the tone-fixed areas are output at a tone between said first and second tones and can be compared with tones of said tone-changing areas (tone-changing area I2 and tone-fixed area D2 (column 4, lines 63-65)); input means for accepting tone information on said first, second and third proof parts from the result of test chart data output on said medium (gray level sequence compared with adjacent gray level standard, point along sequence appearing equal to accurate gray level input by manipulation of keyboard 12 (column 4, lines 42-53)); and adjusting means for adjusting output on said medium based on data for correcting said tone calculated from said tone information input (tone signal calculated based on gray level input, printer controlled by tone signal (column 4, lines 54-62)).

Regarding claims 5-7, said tone-fixed areas of said third proof part of said test chart are arranged alternately with tone-changeable areas of said tone-changing areas in a tone-changing direction of the tone-changing areas (tone-fixed area D2 arranged alternately with tone-changing areas I2, I3 in vertical direction (Fig. 2)).

Regarding claim 9, Ueda discloses a test chart, output from an image output device capable of outputting a color of different tones on a medium and having tone-changing areas where a tone of the color output changes in steps and tone-fixed areas where a predetermined tone of said color is printed (test chart (Fig. 2)), and tone values of said tone-changing areas are readable (gray level sequence compared with adjacent gray level standard (column 4, lines 42-53), comparison inherently requires readability of gray level sequence), and wherein said tone-changing areas are arranged alternately with said tone-fixed areas (test chart with tone-changing areas I1, I2, I3, arranged alternately with tone-fixed areas D1, D2, D3 (Fig. 2; column 4, lines 4-26)), and wherein tone values can be read when a tone difference between adjacent areas of said tone-changing areas and said tone-fixed areas is greater than a specified magnitude (gray level sequence compared with adjacent gray level standard, point along sequence appearing equal to accurate gray level input by manipulation of keyboard 12 (column 4, lines 42-53), comparison inherently requires reading tone differences until gray levels in adjacent areas are equal (specified magnitude equals zero)).

Regarding claim 10, Ueda discloses a test chart, output from an image output device capable of outputting a color of different tones on a medium and having tone-changing areas where a tone of the color output changes in steps and tone-fixed areas

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where a predetermined tone of said color is printed (test chart (Fig. 2)), and tone values of said tone-changing areas are readable (gray level sequence compared with adjacent gray level standard (column 4, lines 42-53), comparison inherently requires readability of gray level sequence), said test chart comprising a first proof part where said tone-changing areas are arranged alternately with said tone-fixed areas (test chart with tone-changing areas I1, I2, I3, arranged alternately with tone-fixed areas D1, D2, D3 (Fig. 2; column 4, lines 4-26)), said tone-fixed areas are output at a first tone and can be compared with tones of said tone-changing areas (tone-changing area I1 and tone-fixed area D1 (column 4, lines 42-53)), a second proof part where said tone-fixed areas are output at a second tone greater than the first tone and can be compared with the tones of said tone-changing areas (tone-changing area I3 and tone-fixed area D3 (column 4, line 65 – column 5, line 1)), and an intermediate proof part where said tone-fixed areas are output at a tone between said first and second tones and can be compared with the tones of said tone-changing areas (tone-changing area I2 and tone-fixed area D2 (column 4, lines 63-65)), wherein tone values having a difference in tone between adjacent pair of said tone-changing areas and said tone-fixed areas greater than a specified magnitude can be read at each of said first, second and third proof parts from results of test chart data output on the medium (gray level sequence compared with adjacent gray level standard, point along sequence appearing equal to accurate gray level input by manipulation of keyboard 12 (column 4, lines 42-53), comparison inherently requires reading tone differences until gray levels in adjacent areas are equal (specified magnitude equals zero)).



Regarding claim 11, Ueda discloses a test chart output from an image output device capable of outputting a color of different tones on a medium and having tone-changing areas where a tone of the color output changes in steps and tone-fixed areas where a predetermined tone of said color is printed (test chart (Fig. 2)), and tone values of said tone-changing areas are readable (gray level sequence compared with adjacent gray level standard (column 4, lines 42-53), comparison inherently requires readability of gray level sequence), said test chart comprising a first proof part where said tone-changing areas are arranged alternately with said tone-fixed areas (test chart with tone-changing areas I1, I2, I3, arranged alternately with tone-fixed areas D1, D2, D3 (Fig. 2; column 4, lines 4-26)), said tone-fixed areas are output at a first tone as a tone of said medium and can be compared with the tones of said tone-changing areas (tone-changing area I1 and tone-fixed area D1 (column 4, lines 42-53)), a second proof part where said tone-fixed areas are output at a second tone greater than said first tone (tone-changing area I3 and tone-fixed area D3 (column 4, line 65 – column 5, line 1)), and a third proof part where said tone-fixed areas are output at a tone between said first and second tones, and the tones of said tone-changing areas with said tone (tone-changing area I2 and tone-fixed area D2 (column 4, lines 63-65)), wherein tone values having a difference in tone between adjacent pair of said tone-changing areas and said tone-fixed areas greater than a specified magnitude can be read at each of said first, second and third proof parts from results of test chart data output on the medium (gray level sequence compared with adjacent gray level standard, point along sequence appearing equal to accurate gray level input by manipulation of keyboard 12 (column 4,

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lines 42-53), comparison inherently requires reading tone differences until gray levels in adjacent areas are equal (specified magnitude equals zero)).

Regarding claims 13 and 14, said tone-fixed areas of said third proof part are arranged alternately with tone-changeable areas of said tone-changing areas in a tone-changing direction of the tone-changing areas (tone-fixed area D2 arranged alternately with tone-changing areas I2, I3 in vertical direction (Fig. 2)).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 4, 8, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda in view of U.S. Patent 5,347,369 (Harrington).

Regarding claim 4, Ueda discloses an image output device for printing a color of different tones on a medium (printer 2 (Fig. 1)), comprising: a function for outputting on said medium test chart data having tone-changing areas where a tone of a color to be printed changes in steps arranged alternately with tone-fixed areas where a predetermined tone of said color is printed (test chart with tone-changing areas I1, I2, I3, arranged alternately with tone-fixed areas D1, D2, D3 (Fig. 2; column 4, lines 4-26)), said test chart data comprising a first proof part where said tone-fixed areas are output at a first tone and can be compared with tones of said tone-changing areas (tone-changing area I1 and tone-fixed area D1 (column 4, lines 42-53)); a second proof part where said tone-fixed areas are output at a second tone and can be compared with tones of said tone-changing areas (tone-changing area I3 and tone-fixed area D3 (column 4, line 65 – column 5, line 1)); and an intermediate proof part where the tone-fixed areas are output at a tone between said first and second tones and can be compared with tones of said tone-changing areas (tone-changing area I2 and tone-fixed area D2 (column 4, lines 63-65)); input means for accepting tone information on said first, second and third proof parts from the result of test chart data output on said medium (gray level sequence compared with adjacent gray level standard, point along sequence appearing equal to accurate gray level input by manipulation of keyboard 12 (column 4, lines 42-53)); and adjusting means for adjusting output on said medium based on data for correcting said tone calculated from said tone information input (tone signal calculated based on gray level input, printer controlled by tone signal (column 4, lines 54-62)).

Regarding claim 12, Ueda discloses a test chart output from an image output device capable of outputting a color of different tones on a medium and having tone-changing areas where a tone of the color output changes in steps and tone-fixed areas where a predetermined tone of said color is printed (test chart (Fig. 2)), and tone values of said tone-changing areas are readable (gray level sequence compared with adjacent gray level standard (column 4, lines 42-53), comparison inherently requires readability of gray level sequence), said test chart comprising a first proof part where said tone-changing areas are arranged alternately with said tone-fixed areas (test chart with tone-changing areas I1, I2, I3, arranged alternately with tone-fixed areas D1, D2, D3 (Fig. 2; column 4, lines 4-26)), said tone-fixed areas are output at a first tone and can be compared with the tones of said tone-changing areas (tone-changing area I1 and tone-fixed area D1 (column 4, lines 42-53)), a second proof part where said tone-fixed areas are output at a second tone and can be compared with the tones of said tone-changing areas (tone-changing area I3 and tone-fixed area D3 (column 4, line 65 – column 5, line 1)), and a third proof part where said tone-fixed areas are output at a tone between said first and second tones and can be compared with the tones of said tone-changing areas (tone-changing area I2 and tone-fixed area D2 (column 4, lines 63-65)), wherein tone values having a difference in tone between adjacent pair of said tone-changing areas and said tone-fixed areas greater than a specified magnitude can be read at each of said first, second and third proof parts from results of test chart data output on the medium (gray level sequence compared with adjacent gray level standard, point along sequence appearing equal to accurate gray level input by manipulation of keyboard 12

(column 4, lines 42-53), comparison inherently requires reading tone differences until gray levels in adjacent areas are equal (specified magnitude equals zero)).

Regarding claims 4 and 12, Ueda does not explicitly disclose the first tone being the color of said medium and the second tone being the highest tone printable by a printer. However, Harrington discloses printer calibration, wherein a test chart similar to that disclosed in Ueda is formed (Fig. 1). In Harrington, striped patterns for 1.0 and 0 gray levels are printed on the test chart (column 3, lines 18-31), which correspond to minimum (no tone) and maximum (darkest print tone) values. Ueda is combinable with Harrington, for Ueda refers to Harrington for providing details of the gray level sequences and accurate gray level standards (Ueda, at column 4, lines 39-41). By extending the test chart of Ueda to provide gray level standards for minimum and maximum tone values, accurate calibration of the printer may be performed throughout the whole range of possible tone values, thereby providing a more accurate reproduction of an image. Therefore, it would have been obvious for one of ordinary skill in the art to combine the teachings of Ueda and Harrington.

Regarding claims 8 and 15, said tone-fixed areas of said third proof part in Ueda are arranged alternately with tone-changeable areas of said tone-changing areas in a tone-changing direction of the tone-changing areas (tone-fixed area D2 arranged alternately with tone-changing areas I2, I3 in vertical direction (Fig. 2)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Lee whose telephone number is (703) 305-

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4870. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thomas D. Lee  
Primary Examiner  
Art Unit 2624

tdl  
March 2, 2005